Appendix P

CA STATE FIRE MARSHAL OVERSIGHT

Intrastate pipeline and that portion of an interstate pipeline which is located within California is subject to the federal Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. Sec.2001 et seq.), the Pipeline Safety Reauthorization Act of 1988 (Pub. L.100-561) and federal pipeline safety regulations.

The Office of the State Fire Marshal (OSFM) Pipeline Safety Division is directly responsible for regulating the safety of approximately 4,500 miles of intrastate and approximately 1,200 miles of interstate hazardous liquid transportation pipelines. Pipeline Safety Division inspects, test, and investigate to ensure compliance with all federal and state pipeline safety laws and regulations. The Pipeline Safety Division consists of engineers, analytical staff, and clerical support located in Sacramento, Middletown, Bakersfield, and Lakewood.

The Division is mandated by state law[1] to exercise exclusive safety regulatory and enforcement authority over intrastate hazardous liquid pipelines and also acts as an agent of the federal Office of Pipeline Safety in the inspection of interstate pipelines. The SFM regulate 46 intrastate and 9 interstate operators. The federal government since 1981 has certified the program.

The OSFM established a Pipeline Safety Advisory Committee for purposes of informing local agencies and every pipeline operator of changes in applicable laws and regulations affecting the operations of pipelines and reviewing proposed hazardous liquid pipeline safety regulations.

Every rupture, explosion, or fire involving a pipeline, including a pipeline system otherwise exempted, and including a pipeline undergoing testing, must be immediately reported by the pipeline operator to the fire department having fire suppression responsibilities and to the Office of Emergency Services. The Office of Emergency Services notifies the OSFM. The pipeline operator must within 30 days of the rupture, explosion, or fire file a report with the OSFM.

The OSFM, every fifth year commencing in 1999, issues a report identifying pipeline leak incident rate trends, reviewing current regulatory effectiveness with regard to pipeline safety and recommending any necessary changes to the legislature.

Figure 1 below provides a summary of incidents, fatalities, injuries and property damage related to liquid pipelines failures in California from 2001 to 2010.

[1] TBP

Figure 1 - Summary of Liquid Pipeline Incidents, Fatalities, Injuries and Property Damage

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Incidents	6	8	12	9	13	13	7	11	2	6
Fatalities	0	0	0	5	0	0	0	0	0	0
Injuries	1	0	1	3	0	0	0	0	0	0
Property Damage*	$2498	$1619	$4432	$27164	$26893	$11050	$3812	$3088	$983	$5830

* Thousands of Dollars

Source: PHMSA

Figure 2 below provides a summary of probable violations issued, compliance action issued and dollars assessed by the SFM to liquid pipeline operators.

Figure 2 - Summary of Probable Violations Issued,

Compliance Action Issued and Dollars Assessed

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Probable Violations	32	40	10	23	21	60	46	84	59
Compliance Action	13	13	4	11	20	19	14	16	8
Dollars Assessed*	$ -	$ 200	$ -	$ 90	$ 500	$ -	$ 5	$ 20	$ -

* Thousands of Dollars

Source: PHMSA

The SFM maintains Geographic Information Systems (GIS)-based maps of all regulated pipelines and has been named as a state repository for pipeline data by the National Pipeline Mapping System (NPMS).

The OSFM assesses and collects from every pipeline operator an annual fee for carrying out this chapter. Funds are also provided by a grant from the federal government. All fees collected are deposited in the Pipeline Operations Account. The money in the account is available, upon appropriation by the legislature, to the OSFM for carrying out its mission.

Authority

The OSFM has adopted hazardous liquid pipeline safety regulations in compliance with the federal relating to hazardous liquid pipeline safety law. The regulations include, but not limited to, compliance orders, penalties, and inspection and maintenance provisions.

The OSFM can exempt the application of regulations to any intrastate pipeline, or portion thereof when it is determined the risk to public safety is slight and the probability of injury or damage remote. Exemptions are documented in writing and include a discussion of those factors, which the OSFM considers significant to the granting of the exemption.

Pipeline Safety Advisory Committee

The Pipeline Safety Advisory Committee is composed of eight members: two represent pipeline operators, three represent local agencies, one is a fire chief, and two are public members. The committee meets when requested by the OSFM, but not less than once a year. Some of the issues the Pipeline Safety Advisory Committee has been engaged in are:

- In consultation with the Pipeline Safety Advisory Committee and pipeline operators, the establishment of evaluation criteria for use by a pipeline operator when conducting any assessment.
- In consultation with the Pipeline Safety Advisory Committee, the development of criteria for identifying which hazardous liquid pipelines pose the greatest risk to people and the environment due to the likelihood of, and likely seriousness of, an accident due to corrosion or defect.
- In consultation with the Pipeline Safety Advisory Committee, the State Water Resources Control Board, the California regional water quality control boards, and local water purveyors, the OSFM at least once every five years reviews the regulations to determine if new measures that have been proven to be technologically feasible, practical, and operationally sound should be included in the regulations.

Operations

Cathodic protection of liquid pipelines was required on all hazardous liquid pipelines constructed after January 1, 1984. Hazardous liquid pipelines constructed prior to January, 1, 1984, were required to have cathodic protection on or before October 18, 1988, except pipelines that transport by gravity or operate at a stress level of 20% or less of SMYS of the pipe, which must have cathodic protection by January 1, 1991.

Hazardous liquid pipeline operators are required to file with the SFM an inspection, maintenance, improvement, or replacement assessment, although there is no intention to require the replacement of a pipeline. When preparing any assessment, priority is given to:

- Older pipelines located in densely populated areas
- Pipelines with a high-leak history
- Pipelines located near existing seismic fault lines
- Pipelines in areas with identified ground formations

A pipeline inspection, maintenance, improvement, or replacement assessment incorporates any information on regulatory requirements or existing public policies that could act as barriers to the inspection, maintenance, improvement, or replacement of pipelines. The assessment is required for the following:

- Any pipeline or pipeline segments built before January 1, 1960.
- Any pipeline installed on or after January 1, 1960, for which regular internal inspections cannot be conducted, or which shows diminished integrity due to corrosion or inadequate cathodic protection.

Any new pipelines must include a means of leak detection and cathodic protection the OSFM determines is acceptable. This does not apply to the replacement of valves and the relocation or replacement of portions of pipelines.

Any new pipeline on which construction begins after January 1, 1990, must be designed to accommodate the passage of instrumented internal inspection devices, and have leak mitigation and emergency response plans and equipment as the OSFM may require.

Any repairs to existing pipelines that can accommodate instrumented internal inspection devices are to be designed and constructed in a manner not to interfere with the passage of these devices.

For pipelines which cannot accommodate internal inspection devices, replacements of portions of the pipe is to be designed and constructed in a manner consistent, to the extent practicable, with the eventual accommodation of instrumented internal inspection devices.

A pipeline operator is required to make available to the OSFM, or any officers or employees authorized by the OSFM, any records, maps, and written procedures that are required to be kept by the pipeline operator including those which concern accident reporting, design, construction, testing, or operation and maintenance.

Higher Risk Pipeline

Each pipeline within the OSFM's jurisdiction that satisfies any of the following sets of criteria is placed on the OSFM's list of higher risk pipelines until five years pass without a reportable leak due to corrosion or defect on that pipeline. Pipelines that are found to belong on the list, but are not so reported by the operator to the OSFM, are placed on the list retroactively. The list includes pipelines that meet any of the following criteria:

- Have suffered two or more reportable leaks, not including leaks during a certified hydrostatic pressure test, due to corrosion or defect in the prior three years.
- Have suffered three or more reportable leaks, not including leaks during a certified hydrostatic pressure test, due to corrosion, defects, or external forces, but not all due to external forces, in the prior three years.
- Have suffered a reportable leak, except during a certified hydrostatic pressure test, due to corrosion or defect, of more than 50,000 gallons, or 10,000 gallons of product in a standard metropolitan statistical area, in the prior three years; or have suffered a leak due to corrosion or defect which has resulted in more than 42 gallons of a hazardous liquid within the pipelines entering a waterway in the prior three years; or have suffered a reportable leak of a hazardous liquid with a flashpoint of less than 140 degrees Fahrenheit, or 60 degrees centigrade, in the prior three years.
- Are less than 50 miles long, and have experienced a reportable leak, except during a certified hydrostatic pressure test, due to corrosion or a defect in the prior three years.
- Have experienced a reportable leak in the prior five years due to corrosion or defect, except during a certified hydrostatic pressure test, on a section of pipe more than 50 years old.

Pipelines on Higher Risk Pipeline list is tested by the next scheduled test date, or within two years of being placed on the list, whichever is first. If any pipeline becomes eligible for the list of higher risk pipelines after that date, the pipeline company must report that fact to the OSFM within 30 days and the pipeline is to be placed on the list retroactively to the date on which it became eligible for listing.

Testing

Hazardous liquid pipelines are periodically tested for integrity using procedures approved by SFM.

Every newly constructed pipeline, existing pipeline, or part of a pipeline system that has been relocated or replaced, and every pipeline that transports a hazardous liquid substance or highly volatile liquid substance is hydrostatically tested.

Every intrastate pipeline not provided with properly sized automatic pressure relief devices or properly designed pressure limiting devices are hydrostatically tested annually.

Every intrastate pipeline over 10 years of age and not provided with effective cathodic protection is hydrostatically tested every three years, except for those on the OSFM's list of higher risk pipelines, which shall be hydrostatically tested annually.

Every pipeline over 10 years of age and provided with effective cathodic protection is hydrostatically tested every five years, except for those on the OSFM's list of higher risk pipelines which shall be hydrostatically tested every two years.

The pressure tests required are conducted in accordance with Subpart E of Part 195 of Title 49 of the Code of Federal Regulations, except that an additional four-hour leak test, as specified in subsection (c) of Section 195.302 of Title 49 of the Code of Federal Regulations, may not be required.

When hydrostatic testing is required, the test results must be certified by an independent testing firm or person who is selected from a list, provided by the OSFM, of independent testing firms or persons approved annually by the OSFM.

The OSFM may require any intrastate pipeline to be subjected to a pressure test, or any other test or inspection, at any time, in the interest of public safety. Test methods other than the hydrostatic tests, including inspection by instrumented internal inspection devices, may be approved by the OSFM on an individual basis.

Notification, Outreach, Liaison

Each pipeline operator is required to notify the OSFM and the local fire department having fire suppression responsibilities at least three working days prior to conducting a hydrostatic test, which is required by this chapter.

Every pipeline operator must provide to the fire department having fire suppression responsibilities a map or suitable diagram showing the location of the pipeline, a description of all products transported within the pipeline, and a contingency plan for pipeline emergencies, which includes, but not be limited to any reasonable information, which the OSFM may require.

Every pipeline operator must offer to meet with the local fire department having fire suppression responsibilities at least once each calendar year to discuss and review contingency plans for pipeline emergencies.

With advice from the Pipeline Safety Advisory Committee, the State Water Resources Control Board, the California regional water quality control boards, and local water purveyors, the OSFM has adopted regulations for wellhead protection plans that provide guidelines to be used by the

pipeline operator to protect the public drinking water well from contamination should a pipeline rupture or leak pose a significant threat to a public drinking water well.

The OSFM reviews each wellhead protection plan submitted by a pipeline operator, and approves those plans that meet the criteria of the regulations adopted by the OSFM. The OSFM evaluates the plan at least once every five years to ensure the plan is in compliance with the current regulations.

Encroachment

As of January 1, 1987, no person, other than the pipeline operator, may do any of the following with respect to any pipeline easement:

- Build, erect, or create a structure or improvement within the pipeline easement or permit the building, erection, or creation thereof.
- Build, erect, or create a structure, fence, wall, or obstruction adjacent to any pipeline easement, which would prevent complete and unimpaired surface access to the easement, or permit the building, erection, or creation thereof.

No shrubbery or shielding may be installed on the pipeline easement, which would impair aerial observation of the pipeline easement. The regulation does not prevent the revegetation of any landscape disturbed within a pipeline easement as a result of constructing the pipeline and does not prevent the holder of the underlying fee interest or the holder's tenant from planting and harvesting seasonal agricultural crops on a pipeline easement.

The regulation does not prohibit a pipeline operator from performing any necessary activities within a pipeline easement, including, but not limited to, the construction, replacement, relocation, repair, or operation of the pipeline.

It is the position of the OSFM that “nothing shall encroach into or upon the pipeline easement, which would impede the pipeline operator from complete and unobstructed surface access along the pipeline right-of-way. Nor shall there be any obstructions, which would shield the pipeline right-of-way from observation. In the interest of public safety and the protection of the environment, it is imperative that the pipeline operator visually assesses the conditions along the easement to ensure the integrity of the pipeline.”

It is the responsibility of the pipeline operator to ensure they have unimpeded surface access and to be able to observe physically all portions of their pipeline rights-of-way. In cases where this is not possible, the pipeline operator informs the OSFM. The OSFM will, in conjunction with the pipeline operator, resolve the issue.

Data and Information

The Office of the State Fire Marshal has established and maintains a centralized database containing information and data regarding the intrastate pipelines. The database includes, but is not limited to, an inventory of the pipelines, including pipeline locations, ownership, ages, and inspection histories, that are in the possession of the owner or operator of the oil field or other gas facility.

The OSFM regularly updates the database and makes the information in the database available to the public, and to all local, state and federal agencies.

Any state or local governmental agency that regulates, supervises, or exerts authority over any pipeline is to report any information or data in its possession to the OSFM. That information is to be submitted to the OSFM in a computer compatible format.

The OSFM conducted a study of the fitness and safety of all pipelines, and investigated incentive options that would encourage pipeline replacement or improvements, including, but not limited to, a review of existing regulatory, permit, and environmental impact report requirements and other existing public policies, as may be identified by the Pipeline Safety Advisory Committee and adopted by the OSFM, that could act as barriers to the replacement or improvement of those pipelines.

The OSFM developed a comprehensive database of pipeline information that can be utilized for emergency response and program operational purposes. The database includes information on pipeline location, age, reported leak incidences, and inspection history, and has the capability of mapping pipeline locations throughout the state.

Utilizing GIS-based location information furnished by the State Department of Health Services and the State Water Resources Control Board, at least once every two years the OSFM determines the identity of each pipeline or pipeline segment that is regulated by the OSFM that transports petroleum product when that pipeline is located within 1,000 feet of a public drinking water well.

Risk Assessment

The OSFM conducted and prepared a risk assessment study dealing with intrastate and interstate hazardous liquid pipelines, which are located not more than 500 feet from any rail line and submitted to the Governor and the Legislature (around 1991).

In an effort to better protect public safety, the OSFM adopted regulations governing the construction, testing, operations, periodic inspection, and emergency operations of intrastate hazardous liquid pipelines located within 500 feet of any rail line. These regulations include provisions dealing with the following:

- Minimum depth of cover for newly constructed or reconstructed pipelines.
- Minimum hydrostatic testing requirements for newly constructed pipelines.
- Minimum requirements for testing existing pipelines, which may have been affected by a derailment.
- Minimum requirements for periodic inspections.
- Minimum requirements for installation and operation of safety or check valves.
- Procedures for developing, testing, approving, and implementing coordinated emergency contingency plans prepared by pipeline and rail operators. These procedures also provide for consultation with local affected agencies, and require pipeline and rail operations to develop and implement emergency training for their employees approved by the OSFM.

Valves

The OSFM adopted regulations that establish procedures for maintaining, testing, and inspecting mainline valves and check valves on intrastate hazardous liquid pipelines.

The OSFM study the spacing of valves, which would limit spillage into standard metropolitan statistical areas and environmentally sensitive areas from surrounding higher ground. If any existing pipeline system's valve spacing is deemed insufficient to protect California's uniquely situated population centers and environmental resources, the OSFM may require the addition of valves on existing pipelines. If the study indicates guidelines for valve spacing do not, in the OSFM's opinion, adequately protect these population centers and environmental resources, the OSFM may require new valves on new, existing, or replacement pipelines as necessary to protect the public interest.

Enforcement

The OSFM may issue orders directing compliance with state code or any regulations adopted. The OSFM will specify in the order the particular action which is required of the person issued the order.

The OSFM has adopted regulations for conducting enforcement proceedings consistent with the procedures specified in Sections 190.207 to 190.215, inclusive, and Section 190.227 of Title 49 of the Code of Federal Regulations.

If the OSFM determines, pursuant to the regulations, a person has violated any regulation adopted, that person is subject to a civil penalty of not more than ten thousand dollars ($10,000) for each day that violation persists, except the maximum civil penalty shall not exceed five hundred thousand dollars ($500,000) for any related series of violations.

- Any person who willfully and knowingly violates any provision or a regulation issued pursuant thereto upon conviction shall be subject, for each offense, to a fine of not more than twenty-five thousand dollars ($25,000), imprisonment for a term not-to-exceed five years, or both.
- Any person who willfully and knowingly defaces, damages, removes, or destroys any pipeline sign or right-of-way marker required by federal or state law or regulation upon conviction shall be subject, for each offense, to a fine of not more than five thousand dollars ($5,000), imprisonment for a term not-to-exceed one year, or both.

All civil penalties collected are deposited into the California Hazardous Liquid Pipeline Safety Fund and the money is used for providing hazardous liquid fire suppression training to local fire departments.

The California Hazardous Liquid Pipeline Safety Fund was also used to fund the comprehensive database of pipeline information that can be utilized for emergency response and program operational purposes.